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EXAMINER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _16 October 2007_.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle,* 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-3,5-13,15,16,20,21,23-26,28 and 29_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-3, 5-13, 15-16, 20-21, 23-26, and 28-29_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
  Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
  Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/16/2007 has been entered.

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

Claims 25 recites a "computer-readable medium" in line 2. The specification does not provide proper antecedent basis for the claimed "computer-readable medium". It is noted that paragraph [00080] mentions the terminology "**system**-readable media" that store instructions and/or data. The Examiner suggests amending the specification to recite "computer-readable medium" instead of "system-readable media" to provide proper antecedent basis for the claimed terminology in the specification.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

Claims 1-3, 5-10, 13, 15-16, 20-21, 23-26, and 28-29 rejected under 35 U.S.C. 103(a)

as being unpatentable over Hessmer et al. (US 2002/0112044 A1) hereinafter Hessmer, in

view of E et al. (US 2004/0019639 A1) hereinafter E, and further in view of Melchione et al.

(US 2002/0091819 A1) hereinafter Melchione.

For Claim 1, Hessmer teaches *a computer-implemented method employed within*

a network (e.g., one embodiment of a network is illustrated in Fig. 1) *comprising:*

displaying a hierarchical tree structure having one or more tree nodes in a

graphical user interface, each of the one or more tree nodes representing a resource of

an application server within a cluster of application servers (i.e., see Fig. 4 illustrating a

hierarchical tree structure to be displayed in a left pane of a graphical user interface.

Also see accompanying discussion in paragraphs [0056-0057], paragraphs [0024-0027]

provides description of a diagnostic object/root illustrated in Fig. 4).

The preamble of the claim further recites that the method is *"employed within a*

network having a cluster architecture". It is noted that the instant specification does not

provide "an explicit definition" or "a limiting definition" of the term "cluster architecture".

In paragraph [00082] the instant specification mentions,

In one embodiment of the invention, the management
techniques which are the focus of this application are used to
manage resources within a **cluster of server nodes. An exemplary
application server architecture** will now be described, followed
by a detailed description of the management architecture and
associated processes.

Paragraphs [00083-00089] along with accompanying Fig. 13 follows the above

mentioned paragraph in the specification which describes the exemplary server

architecture. However, such description of an exemplary server architecture does not

amount to "an explicit definition" or "a limiting definition" of the term *"cluster*

architecture". Therefore, without reading limitations from the specification into the claim,

a broadest reasonable interpretation of the term "cluster architecture" in the context of a

network is a plurality of computers inter-connected and grouped together in a network.

Fig. 1 of Hessmer thus illustrates "a network having a cluster architecture" as recited in

the preamble at least because it shows a plurality of physical server devices (40, 42, 44,

and 50a-50c) along with their logical server applications connected via a network.

Claim 1 further requires, "*the cluster of application servers having a group of*

server nodes and a dispatcher in communication with a central service having a locking

service and a messaging service". The "application servers" recited here can

reasonably be interpreted to mean both "physical server devices" and "logical server

applications". Similarly the "server nodes" recited here can reasonably be interpreted to

mean both "physical server devices" and "logical server applications". Therefore,

according to one interpretation, the claim requires that the cluster of physical server

devices having a group of logical server applications. Alternatively, according to another

interpretation, the claim requires that the cluster of logical server applications having a

group of physical server devices. Hessmer meets the limitation according to both

interpretations since Fig. 4 illustrates, the cluster of physical server devices (*e.g.,*

Computer1 and Computer 2) have a group of logical server applications (*e.g., Server1-*

Server4), as well as the cluster of logical server applications (*e.g., Server1-Server4)*

having a group of physical server devices (*e.g., Computer1 and Computer2).* Hessmer

does not explicitly teach that the cluster of application servers have a dispatcher, and

that the application servers are in communication with a central service having a locking

service and a messaging service. The instant specification does not provide any limiting

definition for the terminology "dispatcher" utilized in the claim. Referring to Fig. 13,

paragraph [00084] mentions, "*In one embodiment, dispatcher 1312 distributes service*

requests from clients to one or more of server nodes 1314, 1316, 1318 based on the load on each

of the servers". Therefore, without limiting, one interpretation of the term "dispatcher" in

light of one embodiment disclosed in the specification could be "a module used for load

balancing". The specification also does not provide any limiting definition for the

terminology "locking service" and "messaging service" utilized in the claim.

E teaches a cluster of application servers (*see Fig. 1*) having a dispatcher (*i.e.,*

*"Distributed data systems may provide for **load balancing** and fail over to improve the*

overall quality of service of the system" [0006]), the application servers (*e.g., 104A and*

104B, and/or process 106A and 106B in Fig. 1) in communication with a central service

(e.g., distributed store 110 in Fig. 1) having a locking service (*e.g., lock mechanism 114*

in Fig. 1) and a messaging service (*see [0039] for messaging service for obtaining a*

token). Therefore, E teaches the additional limitations of the claim not explicitly taught in

Hessmer. The question is whether it would have been obvious to one skilled in the art to

combine the teaching of these two references. Hessmer teaches a method for

monitoring the configuration and operation of data access servers and associated data

source devices employed within a distributed data system (*see Abstract, also [0006-*

0008]). E teaches an improved locking mechanism to help prevent inconsistency in the

distributed data and avoid data clobbering issues that are often experienced in a

distributed data system (*see "Description of the Related Art" section*). Therefore, it

would have been obvious to a person of ordinary skill in the art to modify Hessmer by

incorporating the improved locking mechanism of E in the distributed data system in

order to avoid the potential problems that E attempts to resolve.

Claim 1 further requires, "*at least one of the tree nodes represents a service of the application server*". The instant specification mentions, "*The term 'service' refers to functionality derived from a particular software program. The functionality provided by a service may include, and is not limited to, lifecycle management, security, connectivity, transactions, and/or persistence*" (see [00063]). Referring to Fig. 4 of Hessmer, some of the nodes of the hierarchical tree represents a "Root" of a particular type. Each of these Roots are software programs (i.e., classes, see [0027]) that provides "functionality", i.e., provides monitoring information of a particular type associated with corresponding data access server (see Fig. 3 for various types of default diagnostic root types, i.e., service types. One of the root types is explicitly mentioned as "Transactions" 230). Thus this limitation is met by Hessmer.

Claim 1 further requires,

"*selecting the tree node representing the service of the application server; and displaying a list of one or more service references associated with the service represented by the selected tree node in the graphical user interface;*"

The instant specification mentions, "*The term 'service reference' broadly refers to a software module that provides a 'service' to a service*" (see [00065]). In other words, the limitations require that when a node that represents functionality of a software module or program is selected, a list of one or more software modules used by the software module represented by the node is displayed. It has been already discussed above that the "Root" nodes in Fig. 4 represents a "*service*" or "functionality" of a software module, since "Root" is a "diagnostic object" created from a "class" and hence is a software

module (see [0027]). Hessmer further teaches that once a Root is selected from the tree, lower levels and their associated information are further exposed ("*scalability of elements to expose lower levels and their associated information*", see [0056]). Thus Hessmer teaches displaying a list of service references upon selection of a tree node representing service of the application server as required by the claim.

         Claim 1 further requires, "*displaying a relationship value for each listed service reference, wherein the relationship value is to specify whether the listed service reference is to be automatically started when the service represented by the selected tree node is started*". Although, Hessmer teaches displaying associated information of the service references, he nevertheless does not disclose "*displaying a relationship value for each listed service reference, wherein the relationship value is to specify whether the listed service reference is to be automatically started when the service represented by the selected tree node is started*" as required by the claim. However, similar to Hessmer, Melchione also teaches a method for the configuration, management, and/or monitoring of computer applications and devices via a computer network. Like Hessmer who teaches displaying a tree node representing a service (i.e., a Root/diagnostic object software module), Melchione also teaches at least one of the tree nodes represents a service (e.g., a tree node "VirusScan for Win9x" in Fig. 4 and 5) of a computer application and/or device, selecting the tree node representing the service (selection of "VirusScan For Win9x" as in Fig. 4 or "E-Mail scan" service as shown in Fig. 5), and displaying a list of one or more service references associated with the service represented by the selected tree node in the graphical user interface

(multiple service references as shown in window pane 406B in Fig. 4 and 5), and displaying a relationship value, for each listed service reference, wherein the relationship value is to specify whether the listed service reference is to be automatically started when the service represented by the selected tree node is started (the status of the radio buttons and check boxes constitute a relationship value that specify whether the associated service reference is to be automatically started when the service represented by the selected tree node is started, also see the prosecution history, specifically the "Response to Arguments" section of the OA on 07/16/2007 and the rejection of claim 1 in that OA). Therefore, Melchione illustrates an embodiment of one aspect of his invention that when combined with Hessmer and E teaches all the limitations of the instant invention. The Examiner believes that it would have been obvious to a person of ordinary skill in the art to combine Melchione with Hessmer and E in order to arrive at the present invention. For example, it would have been obvious to those skilled in the art to incorporate the services associated with the Virus scan service as illustrated by Melchione into the application servers of the combined invention of Hessmer and E because protecting the application servers using a virus scan service makes common sense and is considered to be highly desirable so that the servers can be protected from malicious software.

Independent claims 10 (apparatus), 20 (system) and 25 (an article of manufacture) recite similar limitations as claim 1 and therefore have been rejected under the same rationale as discussed in detail for claim 1.

For claim 2, Hessmer further teaches displaying the hierarchical tree structure having one or more tree nodes in the graphical user interface comprises:

displaying the hierarchical tree structure in a first window pane of the graphical user interface (e.g., "In an embodiment of the invention, the diagnostic utility supports creating a graphical image in the form of a window comprising two side-by-side pages. A tree structure diagram having structures similar to the depicted structure of Fig. 4 is depicted in the left pane of the graphical user interface associated with the diagnostic utility 110. [0056]); and wherein displaying the list of one or more service references associated with the selected tree node in the graphical user interface comprises: displaying the list of one or more service references associated with the service represented by the selected tree node in a second window pane of the graphical user interface (e.g., When a user selects one of the depicted nodes of the depicted root structure, the diagnostic utility presents data related to the node, and currently possessed by the diagnostic utility, within the right side pane of the graphical user interface. [0056]).

Furthermore Melchione also teaches displaying the hierarchical tree structure having one or more tree nodes in the graphical user interface comprises:

displaying the hierarchical tree structure in a first window pane of the graphical user interface (404A in Fig. 4 and 404B in Fig. 5); and wherein displaying the list of one or more service references associated with the selected tree node in the graphical user interface comprises: displaying the list of one or more service references

associated with the service represented by the selected tree node in a second window

pane of the graphical user interface (406A in Fig. 4 and 406B in Fig. 5).

For claims 3 (method), 13 (apparatus), 21 (system) and 26 (article of

manufacture), Melchione further teaches displaying the list of one or more service

references associated with the selected tree node comprises: displaying a service

reference name, for each listed service reference, wherein the service reference name

is to identify the service reference ("Enforce VirusScan for Win9x Policies", "inherit" in

Fig. 4; "Prompt for user action", "Move infected files automatically", "delete infected

files automatically" etc. are considered as names for these service references as

shown in Fig. 5).

For claims 5-6 (method), 15 (apparatus), 23 (system) and 28 (article of

manufacture), Melchione further teaches that the displayed relationship value is hard, if

the listed service reference is to be automatically started when the service represented

by the selected tree node is started (selected status of the radio buttons and check

boxes constitutes a hard relationship value); and the displayed relationship value is

weak, if the listed service reference is not automatically started when the service

represented by the selected tree node is started (unselected status of the radio buttons

and check boxes constitutes a weak relationship value).

For claims 7-8 (method) and 29 (article of manufacture), Melchione further teaches displaying the list of one or more service references associated with the selected tree node further comprises: displaying a service reference type for each listed service reference, wherein the service reference type is to specify a service reference type for the listed service reference because displaying the name of each listed service reference also serves as displaying the type of the service reference. As shown if Fig. 4 and 5, the name of the depicted service references specifies the type of the service references as a "service" type.

For claims 9 (method), 16 (apparatus) and 24 (system), Melchione further teaches selecting one of the listed service references; and providing a relationship value for the selected service reference to specify whether the selected service reference is to be automatically started when the service represented by the selected tree node is started (pointing and clicking the mouse button to activate a radio button or check box constitutes selecting one of the listed service references and providing a relationship value).

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hessmer, E, and Melchione as applied to claim 10 above, and further in view of Digiorgio et al. (US 2001/0005201) hereinafter Digiorgio.

For claim 11, Melchione does not teach that the graphical user interface is a Swing-based graphical user interface. However, the Java Swing technology was well known and widely used technology in the art for creating graphical user interface at the time of the invention. Digirgio teaches displaying a GUI using Java Foundation Classes (JFC) that uses "Swing" ([0052]). Therefore, it would have been obvious for a person of ordinary skill in the art at the time of the invention to modify Melchione's teaching with that of Digiorgio to utilize a Swing-based graphical user interface. The motivation would have been to achieve portability among various platforms and simplify implementation (Digiorgio, [0052]).

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hessmer , E, and Melchione as applied to claim 10 above, and further in view of Ismael et al. (US 6,061,721) hereinafter Ismael.

For claim 12, Melchione does not teach that each of the one or more tree nodes comprises a managed bean to provide a management interface for the represented application server resource. Ismael teaches a bean-based management system that uses managed beans to abstract, control and monitor system resource using a graphical user interface. Therefore, it would have been obvious for a person of ordinary skill in the art at the time of the invention to modify Melchione's teaching with that of Ismael to use managed beans as tree nodes to provide a management interface for the represented application server resource. The motivation would have been to utilize the

reusable component feature of a bean object and develop a more flexible network

management environment (Ismael, column 2 lines 3-5).

Response to Arguments

The Examiner acknowledges and appreciates the amendment filed on 10/16/2007,

which has been fully considered.

Objection to the Specification:

In the Final Office Action dated July 16, 2007, the Examiner raised objection to

the specification as failing to provide proper antecedent basis for the claimed

terminology "electronically accessible medium" recited in Claim 25. In response, the

Applicant pointed out paragraph [00080] of the specification, which describes forms of

"memory" and argued that the description of memory in the specification, among others,

supports the limitation "electronically accessible medium". However, since the Applicant

has amended Claim 25 to recite "computer-readable medium", the previous objection

raised by the Examiner is deemed moot due to the amendment. However, the

specification still does not provide proper antecedent basis for the current terminology

"**computer**-readable medium" (although, it is noted that paragraph [00080] mentions

the terminology "**system**-readable medium" that store instructions and/or data).

Therefore, the question becomes whether non-statutory embodiments would be fairly

conveyed to one of ordinary skill in the art given the terminology utilized. In this

instance, it would appear, based on paragraph [00080] in the specification and

Applicant's remarks, to only be reasonable to interpret "computer-readable medium" as

fairly conveying hardware storage and forms of physical article media (e.g., the various

types of "system-readable medium" that store instructions and/or data, as mentioned in

paragraph [00080]) to one of ordinary skill in the art. Furthermore, in order to further

clarify the records for this application, the Examiner would like to point out that in the

amendment filed 04/24/2007, the Applicant deleted portions of the original specification

(e.g., "System inter connection 1170 may include...other propagated signal lines" in

paragraph [00081]) removing any reference to signal or carrier waves (see page 10 of

the remarks) which was the basis for the rejection under 35 U.S.C 101 made in the

Office Action of 02/08/2007. For purposes of examination, the deletion was treated as

an explicit act to remove such non-statutory embodiments from the scope of the claims

and therefore, the rejections under 35 U.S.C 101 were subsequently withdrawn in the

Final Office Action of 07/16/2007. In this Office Action, the same deletion by the

Applicant is also being treated as an explicit act to remove such non-statutory

embodiments from the scope of the claimed "computer-readable medium".

Prior Art Rejections:

Applicant's arguments with respect to claims 1-3, 5-13, 15-16, 20-21, 23-26 and

28-29 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rashedul Hassan whose telephone number is 571-272-9481. The examiner can normally be reached on M-F 7:30AM - 4PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Weilun Lo can be reached on 571-272-4847. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

(Rashedul Hassan)

WEILUN LO
SUPERVISORY PATENT EXAMINER